

DOCUMENT RESUME

ED 228 760

EC 151 606

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 TITLE Handbook for Vocational School Psychology.
 INSTITUTION Iowa State Dept. of Public Instruction, Des Moines.
 Div. of Pupil Personnel Services.
 PUB DATE Jun 82
 NOTE 104p.
 PUB TYPE Viewpoints (120) -- Reference Materials -
 Directories/Catalogs (132) -- Tests/Evaluation
 Instruments (160)
 EDRS PRICE MF01/PC05 Plus Postage.
 DESCRIPTORS *Career Education; Counselor Role; Daily Living
 Skills; *Disabilities; Elementary Secondary
 Education; *Interest Inventories; *Prevocational
 Education; *School Psychologists; Student Evaluation;
 Vocational Aptitude; Vocational Education;
 *Vocational Evaluation; Work Sample Tests

ABSTRACT

Information on vocational school psychology and resource materials are presented. After an introduction to the history of vocational school psychology, a distinction is made between career education and vocational education, and components of the vocational assessment process are examined. In addition, vocational assessment methods are discussed, and the role of the school psychologist in vocational education is considered. Appended materials include the following: a report of a commission to study the school psychologist's role in career and vocational education; a needs/services analysis survey form; sample guidelines for program placement; a case study; sample report formats for vocational assessment; a student interview format; a parent interview format; a list of assessment instruments for functional life skills, independent living skills, and prevocational skills; a chart reviewing vocational interest inventories; a list of considerations for the selection and purchase of commercial work sample systems; a list of steps in developing a local work sample; a list of six professional associations; and an 18-item bibliography. (SEW)

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HANDBOOK FOR VOCATIONAL SCHOOL PSYCHOLOGY

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June, 1982

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CHAPTER ONE

INTRODUCTION TO VOCATIONAL SCHOOL PSYCHOLOGY

Vocational education depends on the help of many professionals to provide quality programs. Teachers, administrators, counselors, and employers are all needed to provide comprehensive vocational services. Recently a new role has been emerging for another group of professionals - school psychologists. The involvement of the school psychologist will provide a valuable linkage to student support services in vocational education, particularly for students who are handicapped. This handbook will explore the role of the school psychologist in vocational education and will focus on a new specialization called Vocational School Psychology. Hopefully, the information will encourage school psychologists to further explore their involvement in vocational education and to participate in the new and exciting field of vocational school psychology.

The introductory chapter is abstracted from an article written by Thomas H. Hohenshil, Chairman of the National Committee on Vocational School Psychology and Professor at Virginia Tech University. Dr. Hohenshil has been a leader in the field of Vocational School Psychology. His article summarizes the historical development of the field and describes the expectations of the school psychologist in vocational education.

The historical development of vocational school psychology spans less than a decade. In 1977, the President of the National Association of School Psychologists (NASP) appointed a commission to study the school psychologists' role in career and vocational education. The commission developed a position paper in which three recommendations were proposed:

- 1) Vocational school psychologist preservice and inservice trainers should collaborate with professionals in vocational-technical education, vocational rehabilitation, special education, and counselor education.
- 2) Vocational school psychologist preparation should train school psychologists for major leadership functions in the provision of vocational school psychological services for youth and adults.
- 3) School psychologists should initiate research on their roles in vocational school psychology to provide documentation for program outcomes.

NASP viewed the movement with such promise that the NASP Delegate Assembly unanimously approved it as the first recognized specialty in the profession in March, 1979. The report of the commission is included in Appendix A.

From an historical perspective, school psychology has evolved through a number of developmental stages in an effort to meet the needs of a wide variety of clientele. Traditionally perceived as a "tester and classifier" of children for special education classes, the school psychologist has recently functioned as an educational and psychological consultant, developmental specialist, behavior management expert, curriculum specialist, and organizational leader.

Since its inception, school psychology has been closely related to special education, primarily at the elementary level. Vocational education has been primarily provided at the secondary and post-secondary levels. Recently, school psychologists have begun to expand their services to the older student. As school psychologists have entered the high school and community college domain, the vocational needs of handicapped students have become a great concern. Parents and handicapped students alike clearly recognize that success in competitive employment is a necessary component of independent adult living. School psychologists will increasingly be needed to help handicapped students bridge the gap between school and work. This shift will require a change in the focus of psychological services from predominantly elementary school to secondary and post-secondary levels; from predominantly placement orientation to follow-through and service orientations; and from basic education concerns to broader life span concerns, including vocational education.

The Practice of Vocational School Psychology

The vocational school psychology concept was born as a field of study, practice, and research that blends the knowledge and skills of traditional school psychology, vocational education, career development, and vocational rehabilitation. The vocational school psychologist is one who has knowledge and skills in each of these professional areas. Psychologists trained in the vocational aspects of school psychology not only provide services in the traditional manner to elementary schools, but also have

knowledge and skills to provide equally high quality services to adolescents and adults in vocational training programs.

Hohenshil and Warden (1978) proposed that vocational school psychologists possess expertise in the following set of competency domains:

- 1) Career and human development theory and research, and the skills necessary to translate this knowledge into developmental and vocational, special, and career education programs.
- 2) Vocational education programs (regular, handicapped, and disadvantaged), and the skills necessary to assist in program development and modification, student selection, behavior management, instruction, and placement.
- 3) Special education programs, and the skills necessary to assist in program development, student selection, behavioral management, instruction, and placement.
- 4) Career education, and the skills necessary to assist in the development and implementation of self and career awareness, orientation and exploration, and preparation, placement and follow-up programs.
- 5) Consultation strategies, and the skills necessary to assist students by working through others (teachers, counselors, parents, administrators, peers, etc.).
- 6) Inservice education techniques, and the skills necessary to develop, implement, and evaluate such programs on a variety of topics for faculty.
- 7) Individual and group assessment strategies, and the skills necessary to develop or select, administer, and interpret a variety of instruments, and translate the resulting data into appropriate educational, decision-making, and behavioral management programs (mental ability, aptitude, interest, career maturity, work sampling, behavioral observation, achievement personality).
- 8) Individual and group counseling practices, and the skills necessary to assist individuals in career, educational, and personal planning and problem-solving.
- 9) Decision-making processes, and the skills necessary to develop and implement programs designed to teach and facilitate career, educational, and personal decision-making.

- 10) Behavior management techniques, and the skills necessary to implement these programs through teachers and parents.
- 11) Special instructional methodologies, and the skills necessary to select and recommend them for appropriate individuals and groups (regular, handicapped, disadvantaged).
- 12) The unique educational and career development needs of special groups (women, minorities, handicapped, disadvantaged, adults, etc.) and the skills necessary to assist them in their development.
- 13) Sexism and racism, and the necessary skills to reduce institutional discrimination in order to broaden the career, educational, and social opportunities for all students.
- 14) Community resources, and the skills necessary to make appropriate referrals and act as liaison between the school and referral agencies.
- 15) Research and program evaluation, and the skills necessary to acquire evidence of the effectiveness of vocational, special, and career education programs.
- 16) Educational trends and state and federal legislation which may influence the development of vocational, special, and career education programs.

The Future

It is clear that not all school psychologists will or should become vocational school psychology specialists. However, it is equally clear that school psychologists cannot function effectively at the secondary level unless they are knowledgeable about vocational education opportunities and the career development needs of handicapped students. It is anticipated that there will be a cadre of specialists specifically trained to function in vocational settings. This training is already available in doctoral programs offered cooperatively by Virginia Tech University and James Madison University, and by Oklahoma State University. In the future, all school psychologists will need

to have some vocational knowledge and skill competencies included in their pre and inservice training programs. One of the greatest challenges to professional organizations during the decade of the 1980's will be to devise and deliver continuing professional development programs to enable all school psychologists to provide expanded services at the secondary level. For those psychologists wishing to specialize in vocational school psychology, the opportunities for rewarding employment in a variety of areas are promising. The potential is clearly evident for growth in school psychology during the 1980's.

Chapter One is an abstract of an article written by Thomas H. Hohenshil, "Roles For School Psychology in Vocational Education Programs For Handicapped Students" and published in School Psychological Services In Secondary Vocational Education. The publication was the result of a conference that was sponsored by Virginia Tech University in cooperation with the Virginia State Department of Education and the NASP National Committee on Vocational School Psychology. The conference proceedings were edited by Thomas H. Hohenshil and Wm. Tucker Anderson.

CHAPTER TWO

CAREER EDUCATION AND VOCATIONAL EDUCATION

Career education and vocational education are not synonymous terms. Career education means the totality of experiences through which one learns about and prepares to engage in work as a part of his or her way of living (Marland, 1976). Vocational education is that part of the career development process that is directly related to the preparation of individuals for employment. According to Ken Hoyt, there are several distinctions that should be made between vocational education and career education.

Vocational education concerns itself with a particular segment of students at the secondary and post-secondary levels; career education concerns itself with all students at all levels. Vocational education is primarily concerned with the world of paid employment; career education concerns itself with paid and unpaid work including volunteerism, leisure activities, homemaking, and the learning activities of the student. Vocational education emphasizes specific job skills; career education adds to the substantive emphasis on adaptability skills. Vocational education is rooted in the philosophy of vocationalism; career education seeks to fuse this work with humanism. Vocational education is carried out through the teaching/learning process;

career education fuses the teaching/learning process with the career development process. The following tenets are generally accepted for career education at the elementary school level:

The two most important factors in career choice are knowledge of self and knowledge of the world of work. These are integrally related.

Positive self-concept and adequate interpersonal skills are fundamental to career development and should be developed in the elementary school years.

Career activities should help a person develop skills to direct one's future and determine what she or he is to become--every child must learn how to choose as well as what to choose.

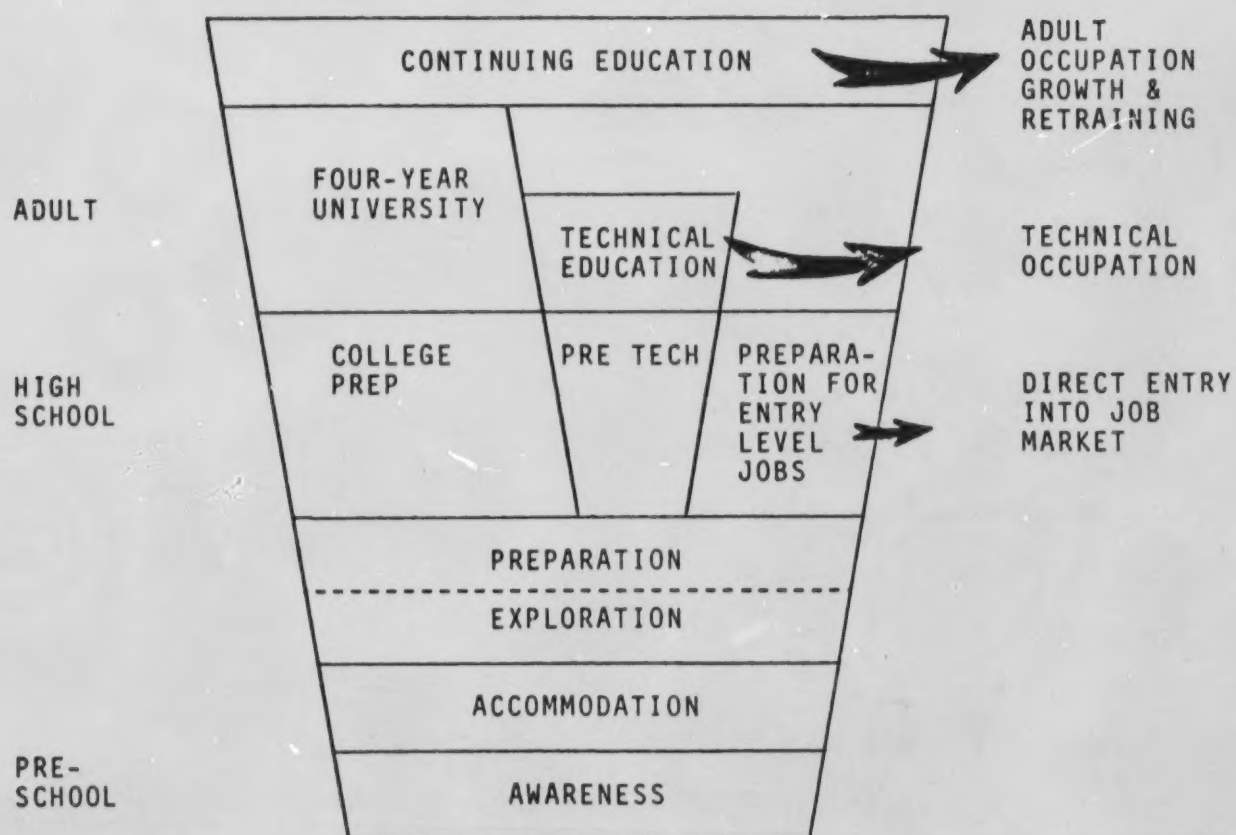
Career activities should provide opportunities for a variety of "hands-on" experiences.

As is implied in the above precepts, career awareness is more than merely extending a child's knowledge base. It should:

- be personally meaningful to the individual child and should relate to his or her own needs, values, and interests
- help the child to expand a repertoire of personal interests and skills
- help the child see the relationship between present school subjects and future roles and goals
- help the child identify with adult workers and help them to envision their own futures as productive participants in the world of work (Szoke, 1982).

Table 1 graphically depicts the phases in the career development process. As the student approaches the high school age, career exploration activities begin to be used to help the student examine several areas of interest that have been emerging since early childhood. It is generally at the high school level that the term "vocational education" begins to be used. Vocational Education is the term used to describe:

TABLE 1



Organized educational programs which are directly related to the preparation of individuals for paid or unpaid employment, or for additional preparation for a career requiring other than a baccalaureate or advanced degree . . . (US 94th Congress, 1976).

Vocational education encompasses a wide variety of occupations.

These occupations are generally classified into clusters as:

- Agricultural Occupations
- Business Marketing and Management Occupations
- Health Occupations
- Home Economics Occupations, and
- Industrial Oriented Occupations

Vocational education programs are ideally provided through a sequence of courses that lead students from general orientation classes to high level training classes with related lab experience. Capstone experiences are offered to the students through "cooperative work education" in which students are placed on the job and simultaneously receive related classroom instruction. For example, a freshman might enroll in a class called "Orientation to Home Economics". The following year, the student might take a course in Foods and a course in Child Development. At this point, the student might decide to further pursue coursework in the Foods area and might enroll in the Commercial Foods Program at the school. If there is still interest in this field, the student might enroll in the school's co-op program offered at a local restaurant. Academic credit would then be earned for the co-op experience while the student gains on-the-job experience. Hopefully, this vocational sequence would lead to paid employment upon program completion. The school psychologist needs to be aware of the vocational sequences available so that handicapped students can participate in the full range of courses provided.

Why has there been so much emphasis on the vocational education for handicapped students? First of all, there has been an increased acceptance of the need for vocational education for all students. The National Center For Research In Vocational Education recently reported that eighty-six percent (86%) of the general public believes that schools should provide students with an opportunity to learn occupational skills. Seventy-seven percent (77%) think that schools should give more emphasis to career preparation through vocational education programs. According to the American Vocational Association, there is considerable evidence that vocational graduates have an advantage in the labor market over non-vocational graduates.

There has also been a realization that handicapped persons can benefit from and have a right to participate in vocational education. For every 100 handicapped persons, only 25 are fully employed (or full time students); 40 are underemployed; 25 are on welfare; and 10 are institutionalized or idle. The economic costs, not to speak of the personal costs, are alarming. It is estimated that it costs from \$45 to \$200 a day to maintain a person in an institutional setting. Vocational education has been given the charge to help with the reduction of the economic problems associated with unemployment and underemployment of handicapped persons.

Vocational education services for handicapped students have increased significantly in the past two decades. There has been a high level of activity in the field evidenced through inservice education programs, special support services, curricular developments, vocational evaluation programs, and job placement programs.

Unfortunately, the data indicated that the state of the art is far from desirable. Handicapped students comprised only 2.1% of the more than 16 million individuals served by vocational education in 1978. Only two-fifths of the mentally and physically disabled are employed during a typical year compared with the three-fourths of all non-disabled adults. Average weekly wages of employed disabled males are 22% lower than their non-disabled counterparts.

Numerous researchers cite attitudinal problems as barriers to successful integration of handicapped students in vocational education. Several myths contribute to the unfavorable attitudes toward the employment of the handicapped. According to research conducted by the DuPont Company, many of the common beliefs held by employers are unfounded. DuPont found that:

- 1) A handicapped person does not increase a company's compensation and disability premiums.
- 2) Safety records are not jeopardized by employing handicapped persons. The accident rate for handicapped persons is not greater than and is often less than that of non-handicapped persons.
- 3) Handicapped persons generally have better attendance records than the average employee.
- 4) Handicapped persons generally do not require expensive or extensive changes in equipment and facilities.
- 5) Handicapped persons generally do not expect special privileges on the job and want to be treated like any other employee (President's Committee).

This information can be helpful to psychologists when working with employers and vocational educators who fear that the handicapped student will be difficult to employ.

In addition to myths, there are several stereotypes that exist in regard to handicapped persons. One stereotype that limits the opportunities for handicapped persons is the mistaken belief that there is only a small range of careers that handicapped persons can pursue. For example, deaf persons are typically placed in jobs where there is a high level of noise such as print shops or mailrooms. Retarded persons may be placed in food service lines, custodial jobs, or messenger services. A particularly offensive stereotype is that retarded persons should be given boring, monotonous jobs because of their need for routine, repetitive activities. Some retarded persons will become bored with repetitive activities and boredom can lower their productivity on the job. These stereotypes suggest that placement decisions are often based on the handicapping condition and not on the interests and abilities of the individual.

The school psychologist should determine if these stereotypes are affecting vocational placements at the schools they service. A Needs/Services Analysis is included as Appendix B. It was developed by Johnson to help school personnel determine if stereotypes affect vocational placements at local schools. At the top of Appendix B, several vocational placement alternatives are described: Regular, Mixed Integrated, Separate, Separate Facility, and Other. Eleven disability categories are listed in the left hand column of the form. A sample of students from each of the disability groups should be used to conduct the assessment. A simple tally of students by disability group should be conducted for each placement alternative. The placement information can be obtained from a review of the student's IEP, interviews with special education teachers and vocational teachers or from a

review of the data submitted to the state department by the school vocational director. A review of the tallied information will identify vocational placements that may be made on the basis of stereotypes. The heading on Appendix B should be changed to reflect the purpose of the analysis. By substituting "Expected Employment" for "Placement Alternative", the form could be used to conduct a survey of the expectations of vocational teachers, special education teachers or parents. Similarly, one might want to use the school's vocational classes as the top heading, e.g. Home Ec, Industrial Arts, Business, Agriculture, Health Occupations. The latter headings should also be subdivided into male and female columns to determine if sex role stereotyping is evident in vocational placement.

Hopefully, the analysis will indicate that students are not being stereotyped into vocational class placements. However if such practices do exist, there is an obvious need to develop practices that reduce stereotyped placements. Table 2 contains a "Sample Checklist of Potential Causes For Underenrollment of Handicapped Students In Vocational Programs". Each item should be reviewed to determine the reasons for limited enrollment in certain programs. A recruitment plan should then be developed to address the identified problem. A sample recruitment plan is included in Table 2.

The recruitment plan should include activities to ensure that the special education and guidance personnel are not familiar with vocational education programs in the district. Activities should be included in the plan that will encourage guidance personnel to visit the vocational classes, observe the class activities, and discuss the goals of the program with the instructor.

The school psychologist should talk to the guidance counselors to determine the method used to schedule handicapped students in vocational classes. Lack of information on the part of those who schedule handicapped students in classes often results in inadvertent discrimination and exclusion from vocational classes. The recruitment plan should also include arrangements for student tours of the vocational education programs so that handicapped students can gain awareness of course offerings and activities.

Placement in the least restrictive environment is a necessary component in vocational education. Students should be exposed to a vocational training environment that will closely approximate the environment in which they will be employed. Not all students will be able to function immediately in a regular vocational classroom. A variety of vocational placements must be made available to students to meet their vocational needs. Initially some students may need to be placed in a special vocational program but may later be able to participate in regular classes. Placement in the regular vocational classroom will be an appropriate placement for many handicapped students if supportive services are provided. A Mainstreaming Continuum is included in Appendix C that describes alternative placements and the support services that should be provided at each level.

Placement decisions must be made on the basis of the needs, interests, and abilities of the individual student. The need to comprehensively assess the vocational and life skills of handicapped students has been increasingly recognized. Valid assessment information is needed to develop vocationally relevant Individualized Education Programs (IEP's). The next chapter will focus on vocational assessment activities that can be used with handicapped students.

TABLE 2

SAMPLE CHECKLIST OF POTENTIAL CAUSES FOR UNDERENROLLMENT OF
HANDICAPPED IN VOCATIONAL PROGRAMS

- () Vocational laboratories inaccessible to mobility impaired
- () Lack of modified equipment/curriculum materials
- () Lack of supportive staff to assist regular vocational staff
- () Excessive class size makes additional enrollment impractical
- () Hesitancy of vocational staff to accept handicapped enrollees
- () No available time slot in vocational laboratories for special needs section
- () Lack of qualified personnel to teach special needs section
- () Students not aware of programs and do not request enrollment
- () Students do not have friends in the regular programs
- () Other

SAMPLE RECRUITMENT PLAN

The following recruitment methods are applicable to all instructional levels.

1. Conduct home visitations to advise students and parents of specialized vocational programs and services available.
2. Confer with interested students on an individual or small group basis.
3. Prepare a question and answer type booklet that explores many of the more common questions asked of the career education program for the handicapped. This can serve as an easy reference source for those interested in the program. The booklet should be designed with a heavy emphasis on graphics and photographs.
4. Prepare a slide presentation on the career education program for the handicapped to include specialized services, areas available for work exposure and vocational training. After some students go through the program, video tapes with student interviews should also be considered. These materials can be shown to professionals working with handicapped individuals, community leaders, parents, and handicapped students themselves.

*Taken from To Serve Those Who Are Handicapped by Claire Olson
Szoke and Sharon Vent, revised edition, 1975.*

CHAPTER THREE

THE VOCATIONAL ASSESSMENT PROCESS

The practice of school psychology in a vocational setting is not that different from practice in other settings. However, it is clear that school psychologists must, in some ways, change the way they function and acquire new and expanded skills if they are to provide the kinds of services needed by vocational educators (Hohenshil, 1980). In most cases, school psychologists will need to reorganize priorities and place more emphasis on existing skills that tend to be underutilized: consultation, situational assessment, organizational leadership, applied research, inservice education. In the case of vocational assessment, however, new skills will need to be learned. New methodologies will need to be mastered. The vocational assessment process is similar to the process used in psycho-educational assessment. Therefore the process itself will not seem foreign to the psychologist even if the methodology is different. This chapter will describe the vocational assessment process. Assessment methodology will be discussed in Chapter Four.

Vocational Assessment

Vocational assessment is " . . . a comprehensive process conducted over a period of time, involving a multi-disciplinary team. The purpose of vocational assessment is to identify

individual characteristics and the education, training and placement needs which provide educators with a basis for planning an individuals program." (Dahl, 1980) Vocational assessment can be viewed as a developmental learning process by which students increase their career awareness and explore interactions between themselves and the world of work.

A major emphasis of vocational assessment is its focus on the world of work. Vocational assessment systematically uses work, real or simulated, as the focal point for assessment and vocational exploration. Vocational assessment incorporates medical, psychological, social, vocational, educational, cultural, and economic data in the attainment of the goals of the evaluation process.

Vocational evaluation is a comprehensive, in-depth form of vocational assessment that has been developed to evaluate the vocational strengths and needs of persons with special needs.

The goals of vocational assessment are to:

- 1) Help students change behaviors, improve their self-concept and enhance their personal career development;
- 2) Provide information for use in developing individual career and vocational education plans;
- 3) To provide recommendations concerning: (a) vocational training; (b) pre-vocational and independent life skills training; (c) job readiness and placement; (d) support services and related agency services; (e) student learning needs, teaching techniques, and curriculum modifications; and (f) academic course selection (NAVESNP and DCD Working Paper).

Components of the Assessment Process

Vocational assessment should be individualized based on the needs of each particular student. A vocational assessment plan should be developed by the school psychologist that will take into account the specific characteristics of the student. The assessment plan should include questions that will be used to guide the evaluation process. This plan could be developed as part of the three year re-evaluation process that is conducted when the student approaches the high school years.

Specific assessment questions should be developed as a student progresses through the junior high and high school curriculum. These assessment questions determine to a large degree the methods to be used in vocational assessment. The identification of specific questions is a crucial part of assessment. Unfortunately, the most common practice is simply to run all students through a common set of tests and then see if any of the information is useful. When this occurs, assessment is often useless for planning instruction. One must consider the question "What do we need to know about this student in order to recommend program placement, teaching strategies, curriculum modification, and support services?" (Texas Education Agency, 1982).

Careful judgment must be exercised when certain types of assessment questions are omitted due to assumptions about a disability. In some cases, it may be erroneously assumed that an individual cannot benefit from vocational programs. However, students may be able to become employable if they are placed in

a vocational education program with modified curriculum, adapted equipment, or supportive services.

As a student progresses through the career development process, the assessment questions will change emphasis. Table 3 includes a description of the emphasis of information gathering that may be typical for grades 7 through 12. Suggested guidelines for developing assessment questions are also included in the table. This table is a suggested sequence only. The emphasis of the questions will be different depending on the developmental level of each student. A case study is included in Appendix D for a student named John. Notice how the assessment questions changed as John developed a better understanding of his career interests and needs.

Once the assessment questions have been identified, evaluation methods and materials should be selected to correspond to the questions and to the student's characteristics. The area of vocational assessment methodology is lengthy and discussion will be delayed until the next chapter. Suffice it to say that the school psychologist can coordinate the various assessment activities that need to be conducted.

Next a vocational evaluation report should be developed. This report should summarize the vocational assessment questions, applicable test data, information obtained from interviews with the student, teachers and parents, recommendations, and suggestions for goals and objectives for the IEP. Vocational evaluation results must be made available to all professionals working with the student within the confidentiality guidelines. Policies should be developed so that vocational teachers and other appropriate

TABLE 3

EMPHASES OF INFORMATION GATHERING BY GRADE

Grade	Emphasis
7	Career awareness and the development of work habits and behaviors
8	Ongoing occupational orientation and exploration of specific interests and abilities for entrance into vocational programs in the 9th grade
9	Additional brief assessment to recommend placement in a regular, handicapped, or disadvantaged vocational program
10	Assessment to provide the appropriate job placement or another placement in a different vocational education program
11-12	Assessment to recommend the appropriate job placement or referral to another agency for those who are not yet employable

SUGGESTED GUIDELINES FOR DEVELOPMENTAL ASSESSMENT QUESTIONS

Assessment Question	Grade						
	6	7	8	9	10	11	12
CAREER EDUCATION SKILLS							
(1) Functional academic skills	x	x	x	x	x	x	x
(2) Pre-vocational skills	x	x	x	x			
(3) Work behaviors	x	x	x	x	x	x	x
(4) Independent living skills				x	x	x	x
(5) Learning style	x	x	x	x	x	x	x
VOCATIONAL EDUCATION SKILLS							
(1) Vocational interests	x	x	x	x	x	x	x
(2) Career Awareness	x	x	x	x			
(3) Mental and physical abilities	x	x	x	x	x	x	x
(4) Entrance into a vocational education program				x	x		x
(5) Job placement					x	x	x
(6) Support services from special education				x	x	x	x
(7) Related agency services				x	x	x	x

Taken from Vocational Assessment of Students With Special Needs, Texas Education Agency, Project No. 11230049, 1982.

personnel have access to evaluation results. (Sample report formats are contained in Appendix E.)

After the evaluation activities have been completed, the school psychologist should participate in a staffing and ensure that the recommendations of the report are included in the IEP. The staffing should involve an interdisciplinary team and should include the student, parents, the vocational evaluation specialist, special education teacher, and rehabilitation counselor as appropriate. At the staffing, the psychologist should participate in the determination of the vocational placement alternative that is best suited to the student's needs. It is not sufficient for the psychologist to report that a student is within a certain range of mental ability and may or may not have the aptitude to succeed in traditional school subjects (Hohenshil, 1981). Psychologists must be skilled enough to predict the probability of success in a wide range of vocational programs to help with the determination of an appropriate training program. The psychologist will need to gain a comprehensive knowledge of the specific traits necessary for success in each vocational training program. The Dictionary of Occupational Titles (DOT) provides general information that may be helpful to psychologists as they consider vocational options. The DOT provides a description for each occupation in terms of characteristics called "worker functions" which are related to working with data, working with people, and working with things. A profile is provided for each job in the DOT. The profile includes the specific vocational preparation time, general education development aptitudes, physical demands, environmental conditions, work activities, and

work situations. This information can be used to relate students interests and abilities to the requirements of specific jobs. A "qualifications profile" is also included in the DOT in which eleven aptitudes are defined and rated on a scale of one-to-five. The aptitudes are: intelligence; verbal ability; numerical ability; spatial ability; form perception; clerical perception; motor coordination; finger dexterity; manual dexterity; eye-hand-foot coordination; and color discrimination.

School psychologists should use the DOT information to conduct applied research at the local level. The information provided in the DOT is obtained from nationwide data. School psychologists should direct research efforts to supplement the nationwide data with local job analysis and task analysis. This information would be extremely helpful to vocational educators and to handicapped students interested in pursuing vocational programs.

The assessment process should also include the identification of support services needed by the student. Services include the traditional referrals to various in-school and community agencies. The school psychologist should develop a close working relationship with vocational rehabilitation services, employment services, special education services, and vocational education services. Close working relationships are also necessary in the business/labor/industrial/government community when placing and working with handicapped individuals in cooperative and work experience vocational programs.

Individual and group counseling services are a direct service that can be provided by school psychologists during and after

the assessment process. The vocational school psychologist may provide work adjustment counseling in addition to other types of crisis-oriented, personal/social counseling. The school psychologist will need proficiency in developmental counseling, values clarification, and career decision making skills when working with handicapped students in career development programs. Information obtained through counseling can help guide the follow-up services that should be provided to students throughout the career development process.

The vocational assessment process is summarized in Table 4. This table outlines the basic steps in the process including intake, student orientation, evaluation planning, vocational evaluation, student feedback, staffing, report writing and follow-up. Specific evaluation instruments will be discussed in Chapter Four.

TABLE 4

VOCATIONAL ASSESSMENT PROCESS: BASIC STEPS

INTAKE

STUDENT ORIENTATION

INITIAL INTERVIEW

PRELIMINARY TESTING

EVALUATION PLANNING

IDENTIFY TENTATIVE DIRECTION OF EVALUATION

- | | |
|---|--------------------------|
| 1. HYPOTHESIS/QUESTIONS | 3. ASSESSMENT TECHNIQUES |
| 2. CRITICAL FACTORS/
INFORMATION NEEDS | 4. PERSONS INVOLVED |

VOCATIONAL ASSESSMENT/EXPLORATION/EXPERIENCE

OCCUPATIONAL INFORMATION
WORK SAMPLES
SITUATIONAL ASSESSMENT
COMMUNITY BASED ASSESSMENT
PSYCHOLOGICAL TESTING
SPECIAL PROJECTS

OBSERVATION
A-V MATERIALS
CLIENT INFORMATION
FEEDBACK SESSIONS
INTERVIEWING

STUDENT INVOLVEMENT - FEEDBACK

STAFFING

FINAL REPORT

FOLLOW-UP

Table provided by University
of Wisconsin - Stout.

CHAPTER FOUR

VOCATIONAL ASSESSMENT METHODOLOGY

A variety of assessment methods are available that can yield vocationally relevant information about students. Methods should be selected on an individualized basis to answer specific assessment questions. Experience based methods that involve the student in work - real or simulated - are characteristics that distinguish vocational evaluation from other types of assessment. Such methods are vital to assure maximum student growth and valid assessment results. However, much information can be derived from existing records as well.

Medical reports should be examined by the psychologist to gather information about physical abilities and to determine potential problems in various employment settings. This data is most often used in identifying jobs or training situations which might be hazardous for a student. A student with uncontrolled epilepsy, for instance, should probably not be placed in a job involving hazardous machinery. A student may have a physical handicap that limits tolerance for physical activities such as lifting, carrying, or stooping. The student may be taking medication that may cause behavior changes, drowsiness, or other side effects. While medication usually does not prohibit training, the vocational teacher should be made aware of those students

who are taking medication, the purpose of the medication, and any side effects (Texas Education Agency, 1982).

While medical information is important, it must be used with care. Job modifications and changes in training processes may make it possible for a student to participate in a vocational program that might at first seem unlikely. The psychologist should identify equipment that could be modified and programs that could be adapted to be accessible to a handicapped student. The psychologist could also recommend physical training or adapted P.E. for students with weak muscle strength. One student was fired from his job because he did not have the upper body strength needed for lifting. The P.E. teacher worked with the boy on strength development and the student was able to regain his previous employment.

Cumulative records provide information that can be related to vocational education. Reading, writing, arithmetic, and language skills are required, to some degree, in most jobs. However, the expected degree of proficiency in these skills varies significantly among various occupations. Psychologists should determine the degree and type of proficiency needed for the different vocational programs and use this information in planning student services.

Informal teacher assessment can also provide information. Information should be systematically collected from special educators and vocational educators regarding a student's learning styles, successes, problems, vocational interests, and social skills.

Much attention has been given in recent years to the assessment of the learning styles of individuals. Information concerning learning styles can be used by psychologists to help vocational teachers adapt their teaching methods to the needs of the handicapped student. Vocational teachers have been responsive to learning style assessment and to its applications for vocational training. Generally, teachers report that learning styles information helps them improve instruction for all of the students in class, not just the handicapped students.

Information to help with assessment can also be obtained from interviews with students and parents. Student interviews should be informal and should be conducted to determine the student's interest in vocational education. Questions drawn from interview formats can be used as guides to elicit useful information from students. For example, if a student indicates an interest in auto mechanics, the psychologist may want to ask other questions, such as, "What do you like about auto mechanics" or "Is someone you know a car mechanic?"

Interviews with the parents should focus on questions about the student's health, friends, leisure time, responsibilities, strengths, needs, and educational plans. Information that parents provide is vitally important. Not only do parents know a great deal about a student's abilities and needs, but the attitudes of parents toward vocational education and future employment will have a great impact in vocational planning for the student. Involving parents in the vocational assessment and planning process will aid in securing parental support for recommendations that result from assessment. Sample interview formats are included in Appendix F, G, and H (Texas Education Agency, 1982).

Paper-and-pencil tests might provide helpful information in some cases such as vocational interest tests, aptitude tests, and achievement tests. The results of these tests should be used with caution, however, since the actual skills of students with special needs may not be demonstrated on such tests.

Scales have been developed to assess adaptive behaviors, functional life skills, and functional academic skills. While such tests have not been extensively used in the past in career planning they can provide valuable information. Appendix I includes a review of some of the instruments available to assess functional life skills, independent living skills and prevocational skills.

Vocational interest tests have been a traditional component of school psychology training. One of the greatest difficulties in using the results of interest tests is that handicapped students frequently lack the necessary language skills and career awareness to obtain valid results. It is difficult for a student to indicate interest in a specific job area if little is known about the world of work in general. For this reason, it is useful to combine vocational interest testing with vocational exploration.

Vocational interest tests can be divided into verbal interest inventories and picture interest inventories. Verbal interest inventories usually provide written listings of jobs or activities for which a student indicates degrees of preference. Picture interest inventories are more appropriate for most handicapped students. They show pictures of people performing activities for which the student indicates likes or dislikes.

Some picture interest inventories use an audiovisual format so that a group of students may be tested at one time. Other inventories present pictures in book form for an individual testing situation. A review of useful vocational interest tests is provided in Appendix J.

All jobs require different abilities and aptitudes. Therefore, one of the most important factors to consider in assessment is the selection of a variety of tests that measure aptitudes required of the occupations being considered by the student. However, aptitude testing does not necessarily predict if a person, especially a handicapped person, has the ability to learn. A low score on a test of mechanical aptitude does not necessarily mean that the student cannot learn to be an automobile mechanic. It may only indicate the lack of work exposure. A student who is given training and is sufficiently motivated may still become employable as a mechanic in spite of a low aptitude score.

Vocational aptitude tests are available in three different formats: paper-and-pencil tests that evaluate multiple aptitudes; performance based, single aptitude tests that primarily assess the ability to work with the hands; and work samples which evaluate a group of aptitudes associated with a particular type of work or job. Multiple aptitude batteries attempt to assess, in one test setting, a number of aptitudes. The Armed Services Vocational Aptitude Battery (ASVAB), the General Aptitude Test Battery (GATB), and the Differential Aptitude Test (DAT) are the most widely known vocational aptitude tests used in schools. Extreme caution

should be taken in using the results of any of these tests with handicapped persons. The paper-and-pencil format of such tests and the required reading skills needed to take them may invalidate the results of these tests with many handicapped students. Several of the single aptitude performance tests are more appropriate for use with handicapped students. However, most of these tests only evaluate manual dexterity skills. Therefore, it will probably be necessary to develop some local assessment tools to evaluate skills such as lifting, carrying, climbing, balancing, pushing, pulling, reaching, visual acuity, and tolerances for different working conditions. Appendix K reviews some of the more widely used aptitude tests.

In the past, paper-and-pencil aptitude tests have been very popular. However, work samples are proving to be a much more accurate assessment method to use with a handicapped student. A work sample is

. . . a well defined work activity involving tasks, material, and tools which are similar to those in an actual job. A work sample is used to assess an individual's vocational aptitude, worker characteristics and vocational interests.

Anatasi (1961) indicated that the work sample task set for the subject "is similar to the work he/she is to perform on the job. The representativeness of the behavior sample and the closeness with which the task duplicates actual job conditions are essential considerations. For practical expediency, work samples are sometimes presented in the form of 'miniature', 'analogy', or 'simulated' tests." Work samples are administered under standardized conditions and use norms or some other

criteria in evaluating student performance. They emphasize "hands-on" tasks that are similar to or the same as tasks required in actual jobs such as sorting materials, or cutting and washing hair. Work samples can also assess generic worker traits, such as range-of-motion, problem-solving, and mechanical aptitude.

There are several reasons why work samples are useful in providing vocational assessment information. Work samples usually do not require reading ability unless it is required on the job. They are much more related to job performance than are paper-and-pencil tests. Work samples provide excellent motivation in that the student feels as if he is "performing work" rather than taking a test. Work samples also facilitate vocational exploration in combination with assessment. They can also be used to measure attitude, motivation, and work behavior as well as specific job skills. Unfortunately, commercial work samples are expensive, require special training, and require extensive administration time, from 2-6 weeks. Psychologists should become knowledgeable of the work sample systems so they can serve as a consultant to school districts. Caution is needed to refrain from becoming overly impressed with the appearance of many work sample systems. Advice is needed from school psychologists to help districts make informed decisions on the selection of work samples that will meet the needs of the students to be evaluated. A chart is included in Appendix L to familiarize the psychologist with questions that need to be asked. In addition, a manual has been developed by the University of Wisconsin at Stout that will be a valuable aid to the psychologist:

A Comparison of Commerical Vocational Evaluation Systems, Materials Development Center, Stout Vocational Rehabilitation Institute, University of Wisconsin-Stout, Menomonie, Wisconsin 54651.
Author: Karl F. Botterbusch.

The manual contains information about the development of the work samples, administration, scoring, norms, observation, reporting, utility training requirements and technical considerations. In addition, the review's summary and comments are provided.

The school psychologist can also provide consultation to teachers to encourage them to develop their own work samples. Local work samples are usually less expensive than commercial work samples. If local work samples are to be developed, the psychologist can provide expertise in the area of task analysis, assessment and behavioral observation. Appendix M includes a table of steps involved in developing a local work sample.

After a student has completed a work sample and other assessment activities, tryouts on actual jobs or in vocational education classes may be used to further verify the findings of vocational assessment. Tryouts should be based upon previously gathered information and should be used to confirm indications of the appropriateness of job placement or entrance into vocational training.

Vocational evaluation is not an end in itself but is an information base upon which appropriate educational decisions can be made. Collection of vocational assessment information must have an impact on programs and curricula as well as individual student programs. Vocational evaluation information may consistently show that training in transportation skills

and modified training in food service is needed. The school psychologist should then recommend that programs be developed to meet these needs. For individual students, vocational evaluation should be used to help prescribe specific learning activities in special, regular, and vocational education classrooms.

As has been shown, the school psychologist is already knowledgeable of many of the tools used in vocational assessment. The task of the school psychologist is to emphasize the vocational aspects of these existing tools and to apply the information to the vocational components of the IEP. In areas such as work samples, the school psychologist may need to gain new knowledge and new skills. The bibliographies included in the reference section of this handbook contain resources to help the school psychologist develop the necessary expertise in unfamiliar areas. The final chapter of this handbook will summarize the role of the school psychologist in vocational education.

CHAPTER FIVE

ROLE OF THE SCHOOL PSYCHOLOGIST IN VOCATIONAL EDUCATION

What is the role of the school psychologist in vocational education? It is probably obvious that the school psychologist can provide a valuable service as a consultant to the vocational educator and special educator. School psychologists have the skills needed to interpret information contained in medical records, cumulative records, and psychometric reports.

The direct involvement of the school psychologist in the use of work samples and situational assessment will probably be limited, primarily due to time constraints. However, the school psychologist can provide a valuable service in the development and utilization of vocational assessment centers. The psychologist can also assist in the selection of evaluation materials and equipment that will be used in the center. It is particularly important that a plan be developed for the center and the target population be identified prior to the purchase of commercial material or commercial work sample systems. Unfortunately the reverse is often true, i.e. the equipment is purchased first and the objectives of the program are then identified. Many schools have found themselves with expensive equipment that is not appropriate for their population of student. A checklist is included in Appendix N to help psychologists set up a vocational assessment in their schools.

In addition to assessment, there are many services that the school psychologist can perform to contribute to the delivery of comprehensive vocational education programs for handicapped students. The school psychologist is in an ideal position to serve as a representative to the vocational advisory council. Each school that receives federal funding for vocational education is required to have one or more advisory councils. The purpose of the vocational advisory council is to provide information to keep the training programs current with the employment needs in the field. The school psychologist could serve on this committee to ensure that an advocate of the handicap is present on the committee and that the needs of the handicapped students are considered by both educators and employers.

School psychologists could also be instrumental in encouraging administrators to conduct joint inservice activities for vocational teachers and special education teachers. The inservice activities that have been most successful have been those in which the vocational teacher and special education teacher have the opportunity to talk about a mutual student enrolled in a vocational class. In general, topics for inservice activities include information about learning and behavioral disabilities, behavior management, curriculum modification, and mainstreaming techniques.

School psychologists can also provide inservice and consultation to help vocational educators modify instructional materials. Materials can be modified to meet the student's need and plans can be made to implement the vocational components of the IEP. Some materials that facilitate that process can be

adapted from programs such as the Cluster Guides developed at Central Michigan University. The cluster guides are based on a competency based approach and include task sheets with objectives and suggested teaching methods. (See Appendix O for sample task sheet). One of the most useful features of the materials is the inclusion of a vocabulary list and a math skills list for each task. The special education teacher can reinforce the math and vocabulary while the vocational teacher is teaching the vocational skills. Of course, these materials will need to be adapted for each teacher's class but adaptation could be accomplished in the joint inservice sessions.

The school psychologist should also facilitate the participation of the vocational teachers in the development of the IEP. The Second Annual Report to the Congress on the Implementation of P.L. 94-142 revealed that IEP's seldom contain concrete long term vocational goals and for this reason do not aid significantly in the career preparation process. Only six percent of all IEP's for 1979-80 contained vocational or pre-vocational short term objectives and thirty-one percent (31%) of the IEP's for students in the 16-21 age group featured vocational goals and objectives. The school psychologist should ensure the participation of vocational teachers in the IEP development process whenever vocational goals and objectives are being discussed. There is a need to translate information obtained from assessment and cumulative records into a format that can be used by vocational educators. A form developed by Dr. L. Allen Phelps included in Appendix P has been very useful in communicating information about the student to vocational educators.

School psychologists could also conduct information groups for parents to inform them of the need for vocational education and the vocational opportunities on the school and community. The activities could vary from a tour of the vocational classes to a presentation made by a local employer.

Finally, there is a very important role that school psychologists could play in molding the future of vocational education. Local hearings are held on the state One and Five Year Plan for vocational education. Psychologists should prepare and deliver testimony on the vocational needs of handicapped individuals at the hearings for both vocational education and special education.

Specialized Training

There may be some school psychologists who would like to pursue further study in the area of vocational education. A doctorate in vocational school psychology is offered cooperatively by Virginia Tech and James Madison University and by Oklahoma State University. Other universities are in the process of developing specialty programs. Training workshops on vocational evaluation in the school setting are routinely offered by the University of Wisconsin at Stout. Stout also offers these workshops at several locations throughout the country. There is a materials resource center at Stout that has numerous materials on vocational evaluation.

At the present time, there are several professional organizations that have specializations in vocational assessment and/or career development of handicapped persons. A list of these organizations is included in Appendix Q.

Hopefully this manual has provided you with the background information needed to further investigate the role of the school psychologist in vocational education. The application of vocational assessment in the school setting is an emerging concept. The expertise of school psychologists is needed to make this service available and appropriate to handicapped students.

Conclusion

The vocational education of handicapped individuals requires cooperation among those in vocational education, special education, guidance and counseling, rehabilitation, and school psychology. The growing interest by school psychologists is encouraging and will undoubtedly result in strengthening the services provided to handicapped students. There are unique skills that school psychologists possess that are needed to improve vocational education opportunities for the handicapped. The interest and enthusiasm of the school psychologist is welcomed. Numerous advancements are certain to result from the contributions that will be made by the profession of vocational school psychology.

APPENDIX A

Report: Commission To Study The School Psychologists'
Role In Career And Vocational Education

REPORT: COMMISSION TO STUDYTHE SCHOOL PSYCHOLOGISTS'ROLE IN CAREER ANDVOCATIONAL EDUCATIONIntroduction

In July of 1977, the President of the National Association of School Psychologists appointed the co-chairpersons of the Commission to Study the School Psychologists' Role in Career and Vocational Education. Leaders in education or school psychology who had expertise in either career education or vocational education were enlisted from across the nation. The nine member Commission proceeded to formulate a set of recommendations which could constitute a position statement of the National Association of School Psychologists.

In almost every reference regarding vocational education for special needs students, vocational educators cite the urgent need for diagnostic services to identify, place students, and plan and evaluate instructional programs for the handicapped and disadvantaged. They also see a great need for revision of vocational curriculum, the extensive need for vocational teacher inservice and preservice education, and the need for consultation services regarding behavior management and instructional techniques to use with handicapped and disadvantaged youth. These concerns and needs have arisen simply because most vocational teachers were not provided adequate training in their preservice education programs to effectively instruct special needs youth. The individual education plans and least restrictive environment stipulations required in P.L.94-142 also cause concern for vocational educators for the same reasons.

Vocational educators are in need of school psychological services to assist them to serve special needs students, but it is not enough to prepare school psychologists to function in vocational-technical educational settings alone. Vocational-technical education is only one aspect of career education. If the profession is to embark upon serving vocational technical education, possession of skills and knowledge in the broader dimension of career education is apparent.

Finally, school psychology has attempted to serve all students, not just the handicapped and disadvantaged students. This service should continue to be provided from preschool through adult and continuing education.

Following this thinking, the commission concludes that the specialty in vocational school psychology be developed to serve secondary students and adults.

Recommendations

The National Association of School Psychologists makes the following three recommendations to school psychologists and school psychologist trainers as a beginning step toward improving pre-service and inservice training in vocational school psychology:

1. Vocational school psychologist preservice and inservice trainers should collaborate with professionals in vocational-technical education, vocational rehabilitation, special education, and counselor education.
2. Vocational school psychologist preparation should train school psychologists for major leadership functions in the provision of vocational school psychological services for youth and adults.
3. School psychologists should initiate research on their roles in vocational school psychology to provide documentation for program outcomes.

Commission Members

James Agner
Kathleen T. Donohue
Thomas H. Hohenshil, Co-Chairperson
Thomas T. Jacobson
John W. Otey
Richard A. Pfeffer
Rutherford B. Porter
Joyce Smith
Paul G. Warden, Co-Chairperson

This report was unanimously adopted by the NASP Delegate Assembly in March, 1979.

APPENDIX B

Needs/Services Analysis

Needs/Services Analysis

	Regular	Mixed/integrated	Separate	Separate facility	Other
Disability	Placement Full integration in voc. ed. with support services outside voc. ed.	Participation in regular voc. ed. with support services in voc. ed. such as interpreters, readers, teacher aides	Full participation in voc. ed. designed for students with special needs but in a high school setting; possibly students will spend part of time in regular academic program	Full participation in voc. ed. programs designed for students with special needs; housed in facility designed to meet needs of severely disabled; total program may include emphasis on self care and independent living	Includes voc. ed. designed for students in unique situations; programs may be offered on an individual basis
1. Mentally retarded					
2. Visually handicapped					
3. Hard of hearing					
4. Deaf					
5. Deaf-blind					
6. Other health impaired					
7. Orthopedically handicapped					
8. Seriously emotionally disturbed					
9. Learning disabled					
10. Multiply handicapped					
11. Speech impaired					
Expected employment	Competitive employment, technical, skilled; may need facility/job modification	Competitive employment, skilled, semiskilled; May need some facility/job modification; may need periodic job follow-through	Competitive, semiskilled, unskilled; likely to need facility/job modification; may need occasional job follow-through	Competitive employment possible with frequent job follow-through; unskilled need job/facility accommodation; sheltered workshops, assembly benchwork	Sheltered workshop possible with extensive training and supervision; work activity center, carefully engineered activities; homebound program

Taken from Johnson, Carole M., Preparing Handicapped Students For Work: Alternatives for Secondary Programming, Council For Exceptional Children Publications, 1980.

APPENDIX C

Sample Guidelines for Program Placement

SAMPLE GUIDELINES FOR PROGRAM PLACEMENT*

TYPE OF PROGRAM

Regular Vocational Program

DESCRIPTION

Students receive instruction in the same classroom/laboratory as their non-handicapped peers and are expected to achieve the same basic minimum performance standards.

Target population: handicapped students (typically the physically disabled) who can participate in a particular regular program with no or very minor modifications.

The program prepares students for graduation followed by employment or post-school vocational training.

SPECIALIZED SERVICES

Specialized vocational counseling and placement services should be available to all handicapped program participants.

Adapted Vocational Program

Students receive instruction in the same classroom/laboratory as their non-handicapped peers and are expected to achieve the same basic minimum standards.

Target population: physically or mentally handicapped students who can participate in a regular vocational program if specialized services are provided.

The program prepares students for graduation followed by employment or post-school vocational training.

Special equipment: specially designed work tables, hand instead of foot levers or vice versa, visual instead of audio warning signals, special safety equipment.

Special instructional materials: brailled/large print materials; written instead of taped materials or vice versa; movies, filmstrips, video tapes, charts and other audio-visual materials; simplified step-by-step materials.

Special supportive staff: special education resource instructors, interpreters, note-takers, direct readers, instructor aides, student aides, student volunteers.

Specially trained vocational teacher and/or team teaching by vocational and special education personnel.

Flexibility in scheduling: extended time to complete course, division of course into modules with flexibility as to number of modules completed.

Specialized vocational counseling and placement services should be available to all handicapped program participants.

TYPE OF PROGRAM

Special Vocational Program

DESCRIPTION

Program is designed for mentally or physically handicapped persons whose disability precludes integration into a regular vocational program.

Students receive instruction in a special class setting. Instruction may be provided in a class limited to individuals with a specific primary disability (e.g., mental retardation, severe emotional disturbance, hearing impairment) or the class may serve a heterogeneous group of students with similar needs.

Training is usually of a semi-skilled nature (custodial training, nurse's aides, etc.) or introductory skills training designed to provide prerequisite skills for entry into a regular vocational education sequence.

Expected performance standards will typically differ from what is required of students in a regular program.

This type of program should provide job entry level skills and it may also provide prerequisite skills needed for entry into post-school training.

Extensive individualization within a regular classroom/laboratory setting.

Program to serve handicapped persons in situations where special class placement not feasible (e.g., low prevalence of handicapping condition and/or specialized vocational needs of individual student).

Also to be included under this type of program would be a flexible modular scheduling approach whereby a handicapped student participates in a regular vocational course for only a limited number of instructional modules (e.g., those modules which focus on entry-level job skills).

Expected performance standards will typically differ from those required of students in a regular program.

This type of program should provide job entry-level skills and it may also provide prerequisite skills needed for entry into post-school training.

SPECIALIZED SERVICES

Services described under adapted vocational education.

Specialized curriculum design that emphasizes easily completed task components and entry-level job skills.

Courses should be taught by vocational teachers with special preparation in instructing the handicapped or by a team teaching approach utilizing both vocational and special education personnel.

Specialized vocational counseling and placement services should be available to all handicapped program participants.

Services described under special vocational program.

APPENDIX D

A Case Study

A CASE STUDY

The following case study illustrates how a systematic process of vocational assessment might work. Note the three levels of assessment, and how each flows into the next.

John, a sixth grader, was labelled "mentally retarded" (IQ around 68). His reading level was second grade, and he was not very motivated to attend school. The school psychologist identified the following assessment questions:

1. What are John's interests?
2. What awareness does John have of jobs and their requirements?
3. What are John's functional life skills?
4. Could John learn to read better if reading were related to a vocational skill that he likes?
5. What are John's physical skills?

Plans were made to collect assessment information as part of John's instruction in order to answer the above questions. In addition, a checklist of prevocational and functional life skills was completed based on the input from the special education teacher, parents, and student. The special education teacher administered a vocational interest inventory. Information was collected throughout the seventh grade. They found that John liked auto mechanics and building trades but that he knew little about these two trade areas; that he did not engage in much physical exercise because his parents would not let him leave the house; that John became excited about learning to read the names of tools and auto parts; and that John had few independent living skills. The physical education teacher further identified some specific physical deficits. The following educational services were recommended to be included in John's IEP; (1) reading instruction using concepts and vocabulary related to a vocational area of John's interest, (2) a physical education class.

The IEP Committee reviewed this information at the end of the seventh grade. Based on this information the committee was able to plan a new instructional program for John and could identify additional assessment questions that needed to be answered. The updated IEP included: enrollment in an occupational information course; specific work on physical deficits in the physical education program; continuation of the vocational reading program; and functional life skills training through joint efforts by the special education teacher and parents. Additional assessment questions were identified:

1. Should John enter a Vocational Education for the Handicapped (VEH) program in small engine repair that is offered in the ninth grade at his school?
2. What academic skills does John need to have prior to vocational training?
3. How well is John learning functional life skills?

Several methods were used to answer these assessment questions during the eighth grade. The vocational assessment specialist gathered information regarding the curriculum and prerequisite skills for the small engine repair program and for the auto mechanics program. John was given a vocational aptitude test and was also assessed on a small engine work sample. This work sample had been jointly developed by the vocational teacher and the vocational assessment specialist to assess student interest in and ability to learn small engine repair. The report written by the vocational assessment specialist indicated that John did poorly on the written vocational aptitude test, but on the work sample he showed great interest and adequate potential for semiskilled work associated with small engines. An analysis of requirements for the auto mechanics program indicated that measuring skills and functional reading skills are important. The work sample and other assessment information indicated that John was deficient in these areas. Information was also gathered based upon John's performance in his classes through the use of simple competency-based checklists. According to the information obtained from John's performance in class, he maintained an interest in auto mechanics, improved his reading to a fourth grade level, and improved his physical stamina.

At the end of the eighth grade, the IEP committee reviewed this information and recommended placement in the VEH Small Engine Repair program. The VEH teacher and the special education teacher planned a combined program for increasing John's measuring skills. The special education teacher and his parents continued to work on his functional life skills.

John stayed in the VEH Small Engine Repair program through the ninth and tenth grades. In the tenth grade, John entered a special education class specifically designed to teach independent living skills. The vocational teacher kept yearly competency-based assessment checklists of John's progress. A major question that needed to be answered during this year was: "Can John enter a regular auto mechanics vocational program in the eleventh grade?" Since John was now in the Small Engine Repair program, the IEP committee felt that a recommendation based on systematic observation by the VEH teacher could be used as a basis for recommendations. The vocational assessment specialist assisted the VEH teacher in assessing the skills that John would need in the regular auto mechanics program.

The IEP committee then met at the end of John's tenth grade year. Based on the recommendation of the school psychologist and VEH teacher, John was admitted to the regular auto mechanics program in the eleventh grade. While it was clear that John might never be a master mechanic, his vocational teacher felt that he could be trained as a brake specialist and a modified program was developed for him. The special education teacher and auto mechanics teacher developed a program in which the special education teacher tutored John in auto mechanics studies and helped administer certain tests that he had difficulty reading. John made progress, and upon graduation was employed as a brake specialist in a chain operation.

APPENDIX E

Sample Report Formats

VOCATIONAL EVALUATION REPORT FORMAT

The vocational evaluation report should respond to specific assessment questions developed in the individual assessment plan and provide assessment information in several areas. A general format will include the following types of information:

- I. IDENTIFYING INFORMATION
- II. REASON FOR REFERRAL; LIST OF ASSESSMENT QUESTIONS
- III. LIST OF ASSESSMENT INSTRUMENTS AND TECHNIQUES USED TO ANSWER ASSESSMENT QUESTIONS
- IV. RESULTS
- V. ANALYSIS OF TEST RESULTS IN TERMS OF ASSESSMENT QUESTIONS—will usually include information concerning strengths and needs in each of the following areas
 - A. Work behaviors, attitudes, and habits
 - B. Vocational interests and career awareness
 - C. Specific vocational skills and aptitudes
 - D. Physical skills
 - E. Community and independent living skills
 - F. Vocational related academic skills
- VI. RECOMMENDATIONS—may include:
 - A. Program placement—both vocational and academic
 - B. Specific instructional goals, objectives, and suggested teaching methods
 - C. Prevocational and life skills training
 - D. Support services related to vocational training
 - E. Suggestions for a job and or any curriculum modifications in the training program

BASIC VOCATIONAL ASSESSMENT REPORT

I. Student Information

Student name: _____

Grade: _____ Handicap: _____

Present program placement: _____

Date: _____

II. Vocational Assessment Questions

1. _____

2. _____

3. _____

4. _____

5. _____

III. Special Education Test Data

Diagnostician: _____

Test	Results	Date
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Comments: _____

IV. Student Interview

Interviewer: _____ Date: _____

Interests: _____

Career Awareness: _____

Family Support: _____

Comments: _____

V. Parent Interview

Interviewer: _____ Date: _____

Career plans for student: _____

Support for working: _____

Comments: _____

VI. Information Gathered During Instruction

Type Information	Source	Skills	Needs
Mental Abilities _____			
Functional Academic Skills _____			
Sensory Abilities _____			
Learning Style _____			
Functional Life Skills _____			
Vocational Interests _____			
Prevocational Skills _____			
Work Attitude and Behavior _____			

VII. Aptitude and Interest Testing

Test Administrator: _____

Location: _____

Test Used	Date	Results

Interpretation and Comments: _____

VIII. Answers to Assessment Questions

1. _____

2. _____

3. _____

4. _____

5. _____

IX. Recommendations**Is Comprehensive Vocational Assessment needed?**

____ Yes: Why? _____

____ No: Why not? _____

Vocational Program/Placement**Functional Life
Skills****Related Academics**

Signed: _____**Vocational Assessment Specialist**

Taken from Vocational Assessment of Students With Special Needs,
 Texas Education Agency, Project No. 11230049, 1982.

APPENDIX F

Student Interview Format

STUDENT INTERVIEW FORMAT*

Name: _____ Date: _____

Age: _____ Address: _____ Grade: _____ Age: _____

Interests and activities.

5. What do you do in your leisure time? Sports? Hobbies? Church? etc.
6. Do you have any jobs at home? What?
7. What job do you think you would like to do and be good at?
8. What job(s) do you really think you would not like? Why?

Occupational and Career Awareness.

9. Name as many jobs as you can (up to 15).
10. Name three jobs available in a supermarket.
11. What are ways to find out about job openings?
12. What do employers look for when they hire someone?
13. What are some reasons people get fired from jobs?
14. What would an employer like about you? Not like?
15. What should you do if your are going to be late or absent from work?

Work and classroom preferences.

16. What teachers do you like best? Why? Which least? Why?
17. Do you like to work by yourself or with a group?
18. On a job, would you rather sit most of the time or move around a lot?
19. Would you rather work outside or inside, or both?
20. How would you feel about working where it is cold? Hot? Wet? Where there are dangerous things about?
21. What kinds of people do you *not* like to work with?

Educational interests.

22. What courses would you like to take? Which do you not want to take?
23. Would you like to enroll in vocational training now or later? What?

Functional Skills.

24. If you lived by yourself and had a job, what are some of the things you would *have* to spend your money on each month?
25. How much does it cost for groceries for two people each week if you cook at home?
26. Can you use a telephone? How do you dial emergency?
27. If you had a job, how would you get to work? Can you drive?
28. Do you go shopping by yourself? What do you buy?

Family.

29. How do your folks feel about your working?
30. Do they trust you?

*(Adapted from form developed at Region XX Education Service Center)

Taken from Vocational Assessment of Students With Special Needs,
Texas Education Agency, Project No. 11230049, 1982.

APPENDIX G

Student Interview

STUDENT INTERVIEW

Student's Name: _____ Date: _____

Parent/Guardian Name: _____

Address: _____ Phone Number: _____

1. What kind of high school program would you like to take?

Classes preparing for college _____

Classes in which basic reading, math, writing, and world of work skills are taught _____

1/2 day classes and 1/2 day work for school credit _____

2. What kind of skills would you like to learn in school? (e.g., math, reading, writing, spelling, job-seeking skills, job keeping skills, etc.)

Please list: _____

If a 1/2 day class-1/2 day work program was recommended for you during high school, would you consider such a program?

Yes _____

No _____

4. What do you see yourself doing after high school? (circle one)

College

Jr. College

Military

Trade School

Skilled employment (mechanic, welder, carpenter, etc.)

Semi-skilled employment (grocery store, restaurant, factory, construction labor, etc.)

Other _____

5. List two jobs at which you think you could enjoy and succeed.

APPENDIX H

Parent's Interview

PARENT'S INTERVIEW

Student's Name: _____ Date: _____

Parent/Guardian Name: _____

Address: _____ Phone Number: _____

1. What kind of high school program would you like your child to take?

Classes preparing for college _____

Classes in which basic reading, math, writing, and world of work skills are taught _____

1/2 day classes and 1/2 day work for school credit _____

2. What kind of skills would you like your child to learn in school? (e.g. math, reading, writing, spelling, job-seeking skills, job keeping skills, etc.)

Please list: _____

3. If a 1/2 day class-1/2 day work program was recommended for your child during high school, would you consider such a program?

Yes _____

No _____

4. What do you see your child doing after high school?
(circle one)

College

Jr. College

Military

Trade School

Skilled employment (mechanic, welder, carpenter, etc.)

Semi-skilled employment (grocery store, restaurant, factory, construction labor, etc.)

Other

5. List two jobs at which you think your child could enjoy and succeed.

Parent Signature _____

Date _____

*Developed by the Tri-County Cooperative, Commerce TX 75428

APPENDIX I

Functional Life Skills, Independent Living Skills and
Prevocational Skills -- Assessment Instruments

Functional Life Skills, Independent Living Skills and
Prevocational Skills -- Assessment Instruments

Social and Prevocational Information Battery (SPIB)

This test is designed to assess functional skills in the following nine areas: hygiene and grooming; functional signs, job-related behavior, home management, health care, job-seeking skills, budgeting, banking, and purchasing habits. Test questions are read to the student. A special form (T) is available for TMR students.

Publishers Test Service
CTB/McGraw-Hill
2500 Garden Road
Monterey, California 93940

Brigance Inventory of Essential Skills - Secondary

Designed for use with TMR secondary students, this assessment is criterion-referenced for the following skills; basic reading, language, math, food and clothing, money and finance, travel and transportation, and communication and telephone skills.

Curriculum Associates, Inc.
5 Esquire Road
North Billerica, Massachusetts 01862

Everyday Skills Tests

This is a reading and math test based on the ability to read labels, store directions, signs, want-ads, schedules, and forms.

CTB/McGraw-Hill
Del Monte Research Park
Monterey, California 93940

Street Survival Skills Questionnaire (SSSQ)

This test assesses functional life skills of developmentally disabled students in the following areas: basic concepts, functional signs, tool identification and use, domestic management, health, first aid and safety, public services, time, money, and measurement. The SSSQ consists of nine separate booklets, each containing 24 questions.

Common Market Press
P.O. Box 45628
Dallas, Texas 75245

AAMD Adaptive Behavior Scale

This scale assesses the adaptive behavior of persons with mental disabilities. An informant provides data concerning student abilities and behaviors in a number of functional areas.

Edmark Associates
P.O. Box 3903
Bellevue, Washington 98009

Life Centered Career Education: A Competency-Based Approach

This curriculum provides a competency listing of skills needed by individuals to function effectively in adult society. The 22 competencies or skills are organized into the following broad areas: daily living skills, personal-social skills, and occupational guidance and preparation. A Competency Checklist is provided for the identification of student skills, progress monitoring, and IEP development.

Publications Department
Council For Exceptional Children
1920 Association Drive
Reston, Virginia 22091
(Cost: \$12.50)

Camelot Behavioral Checklist

This checklist provides an assessment of student skills and needs in 10 categories: self-help, physical development, home duties, vocational behavior, economic behavior, independent travel, numerical skills, communication skills, social behaviors, and responsibility. The evaluator indicates whether the student "can do" or "needs training" next to each of the 339 skills. A Skill Acquisition Program Bibliography provides information useful in developing a curriculum for teaching these skills. Background information is gained through interviews with parents, by teachers' completing relevant portions, and through direct observation.

Camelot Behavioral Systems
P.O. Box 3447
Lawrence, Kansas 66044

Skills to Achieve Independent Living (SAIL)

This is a comprehensive independent living skills program for mentally handicapped persons. The curriculum and accompanying checklist are divided into the following areas: personal management, community access, home management, and applied academics. Four checklists are used for assessment. A "SAIL Progress Profile" can be used to summarize and monitor progress in various areas of the curriculum.

Melton Peninsula
 1949 Stemmons Freeway
 Suite 690
 Dallas, Texas 75207
 (Cost: about \$295/total curriculum)

SCOR Curriculum: Independent Living Skills Assessment System

This is an assessment system designed for use in recording, planning, and reporting client progress. The system provides an objective, required materials, and performance criteria for over 900 target skills both prior to and during the instructional process. Areas covered include personal management, social development, household management, academics, leisure time, job readiness, and work skills.

Copy Shop
 Casa Grande Center
 235 Casa Grande Road
 Petaluma, California 94952
 (Cost: \$20.00)

Assessment of Basic Vocational Related Skills

This project developed 16 modules for use by vocational teachers assessing the following skill areas for special needs students: academic skills, motor skills, and vocational interest and awareness. The informal assessment modules were developed for use by vocational teachers in: welding, sheet metal, agriculture, graphic arts, woodworking, automotive, auto body, drafting, health occupations, world-of-work, food preparation, child care, distributive education, electricity, horticulture, and office occupations. Each manual costs about \$2.75.

Vocational Teacher Education
 University of Northern Colorado
 Greeley, Colorado 80639

Florida International Diagnostic-Prescriptive Vocational Competency Profile

This is a 70-item profile that covers vocational domains of self-help skills, social-emotional adjustment, work attitudes and responsibility, cognitive learning ability, perceptual motor skills, and general work habits. It is designed for use with adolescents and adults who are educable mentally retarded, trainable mentally retarded, specific learning disabled, seriously emotionally disturbed, and economically disadvantaged, and it also can be used in special education classes, work-study programs, resource rooms, vocational classes, evaluation units, and career education laboratories.

Stoelting Company
 1350 S. Kostner Avenue
 Chicago, Illinois 60623
 (Cost: approx. \$22.50)

The Vocational Behavior Checklist (VBC)

The VBC was developed through a grant from the Rehabilitation Services Administration to assess vocational behaviors of handicapped persons. Two hundred checklists were reviewed and the most effective style and items were chosen for the VBC. The VBC contains 339 skills in the following areas: prevocational, job-seeking, interview, job-related, and union financial security. This checklist is an excellent source for provided assessment as well as for developing a curriculum for work-related behaviors.

Publications Department
West Virginia University
Vocational Research and Training Center
1223 Myers Avenue
Dunbar, West Virginia 25064

San Francisco Vocational Competency Scale

This vocational rating scale, designed for use with mentally retarded persons, includes 30 statements concerning vocational behavior. For example, Item 28 measures:

Reaction To Absence Of Supervision

When left unsupervised, the student

- 1-stops working
- 2-shows a substantial decrease in productivity
- 3-shows a moderate decrease in productivity
- 4-shows a small decrease in productivity
- 5-show no decrease in productivity

Such rating forms can be developed or used with a wide variety of classes in the secondary school. A great deal of information can be gained concerning student characteristics in these environments. If these ratings are tracked throughout the secondary school and summarized yearly, then trends of student development can be traced and student program areas and strengths easily identified.

The Psychological Corporation
304 East 45th Street
New York, New York 10017

Vocational Education-Special Education Project II VESEP II

Materials from this project can be used by a special education teacher as the basis for a total vocational development program for handicapped students in secondary schools. The assessment materials provide a checklist of prevocational enabling skills divided into eight general areas.

Career Education Resources
3rd Floor, Erickson Hall
Michigan State University
East Lansing, Michigan 48824

APPENDIX J

Review of Vocational Interest Inventories

REVIEW OF VOCATIONAL INTEREST INVENTORIES

PICTURE INTEREST INVENTORIES		DESCRIPTION	DISABILITY POPULATION	ADMIN. SCORE					
NAME/ADDRESS	COST			GP	IND	TIME	HAND	M*	TIME
Comparative Career Search Indiana Career Resource Center 1205-09 S. Greenlawn South Bend, IN 46614 (214) 289-2851	Sound/ film-strip \$65 Sound/slide \$150.00 Include 200 answer sheets .08¢ ea.	72 sets of paired pictures of jobs are shown and most liked are selected.	All, especially 14 and older except blind	X	X	40 min.	X	X	
AAMD Reading-Free Vocational Interest Inventory AAMD, 5201 Connecticut Ave., NW Washington, D.C. 20015	\$1.25 per form	Separate male/female forms. Most liked of three pictures is circled/55, males, 40, females. Designed for MR's.	MR 14+	X	X	10-15 min.	X		10 min.
Geist Picture Interest Inventory Western Psychological Services 12031 Wilshire Blvd., Los Angeles, CA 90005	Kit (10) \$9.50 Male: 25 for \$8.50. Female: 25 for \$7.50	Separate male/female forms. Selects 1 out of three pictures showing jobs on activities. Read questions under pictures.	LD, ED; 8th grade reading level	X	X	15-20 min.	X		5-10 min.
Picture Interest Exploratory Survey (PIES) Career Education Media P.O. Box 27083 Tempe, AZ 85282	Initial: \$350. Ans. sheets 11¢ ea.	Series of slides showing hands working. Student circles number of pictures they like on answer sheet.	LD, ED, High EMR, Deaf	X	X	30 Min.	X		10 min.
Vocational Interest and Sophistication Assessment (VISA) Ohio State University Mental Retardation Training Program Columbus, OH 43210	Initial: \$7.00 25 male for \$2.50 25 female for \$2.50	Measures interest and job knowledge of retarded persons. Pictures are presented in booklet and examiner asks questions of student about the picture	MR 14+	X		30 Min.	X		15 min.
Program for Assessing Youth Employability Skills (PAYES) Program of Vocational Education Educational Testing Service Princeton, NJ 08540	Package of 10 for \$33.00	Measuring 3 attitudes (job-holding skills, attitudes towards supervision, self-confidence), 3 cognitive (job knowledge, job-seeking skills, reasoning vocations interest). Pictures, 4th & 5th grade reading level.	High EMR, Deaf, LD, ED, Blind (mod), Disadv. 14+ yrs. 4th & 5th gd. reading level.	X	X	1-2 hr.	X		15 min.
Vocational Education Special Education (VESEP): Interest Scramble Board Career Education Resources 3rd Floor, Erickson Hall Michigan State University East Lansing, MI 48824	App. \$25.00	Part of several resources designed for teacher use. Two packets of 50 pictures are arranged on a board (5 squares by 10 squares) from most liked to least liked	EMR, Deaf, ED, LD, OH	X	X	30-60 min.	X		15-20 min.

NAME/ADDRESS	COST	DESCRIPTION	DISABILITY POPULATION	GP	IND	TIME	HAND	M*	TIME
Vocational Interest Screening: VALPARTHY VALPAR Corporation 3801 E. 34th Street Tucson, AZ 85721	Initial cost approx. \$3,100.00	Pairs of color slides. Student circles liked picture in booklet with same picture on slide.	EMR, TMR	X	X	30-40 min.	X	X	20 min.
Wide Range Interest Opinion Test (WRIOT) Jastak Assessment Systems, Inc. 1526 Gilkin Avenue Wilmington, DE 19306	Initial cost approx. \$75.00	Students pick pictures in a spiral booklet - most liked and most disliked & circle on answer sheet. Profile on 18 occupational groups and 2 attitudes.	Age 5+, EMR TMR, Deaf, ED, LD	X	X	40-60 min.	X	X	10-15 min.
Ohio Vocational Interest Survey The Psychological Corp., 757 Third Avenue New York, NY 10017	\$2.90 specimen set.	Designed to help high school students respond to job activities on a scale ranging from "like very much" to "dislike very much."	Deaf, LD, ED, Blind, OH, Grades 8-12	X	X	90 min.		X	
Comprehensive Career Assessment Scale Learning Concepts 2051 N. Lamar Austin, TX 78705	(1) Test booklet \$1.95/ea 25 profiles for \$3.75	75 job titles on which students indicate degree of familiarity and interest on a 1-7 scale.	Deaf, ED, LD, Grades 3-12	X	X	15 min.	X		15 min.
California Occupational Preference System (COPS) Educational and Industrial Testing Service P.O. Box 7234 San Diego, CA 92107	Manuals \$2.00, 25 booklets for \$13.00 Cluster Charts of 14 for \$9.95	3 forms: COPS-1COPS-R. Student asked to rate degree of interest in listed job activities.	LD, ED	X	X	60 min.	X	X	Student scored
Minnesota Importance Questionnaire (MIQ) Vocational Psychology Research Elliott Hall University of Minnesota Minneapolis, MN 55455	Around \$2.00 per student, computer scored.	Measures vocational reinforcer needs & compares to reinforcers available in job computer profile, ranking occupational groups in order of preference.	LD, ED, Deaf, Blind (mod), EMR (mod), 5th gd. reading level	X	X	40-50 min.		X	
Individual Career Exploration Scholastic Testing Service 480 Meyer Road Bensenville, IL 60106	Initial: \$26.00 20 for \$7.50	Choice of pictures showing activities. Explores 8 career groups and 6 decision levels.	EMR, Deaf, ED, LD, Grade 6-12	X	X	20 min.	X		10 min.
Career Awareness Inventory (CAI) Scholastic Testing Service 480 Meyer Road Bensenville, IL 60106	\$13.00	Written statements respond to pictures. Part 1-identifies jobs & workers from picture; Part 2-awareness of educ. requirements; Part 3-fam w/specific workers, etc.	Deaf, ED, LD, EMR (mod)	X	X	60-90 min.		X	
Self-Directed Search Consulting Psychologist's Press 577 College Palo Alto, CA 94306	25 for \$17.50	Self-administered vocational exploration. Fill out booklet & obtain code. Look up jobs in an "Occupations Finder" booklet.	LD, ED, OH, Deaf, EMR (mod)	X	X	40-60 min.	X		NA

APPENDIX K

Review of Aptitude Tests

REVIEW OF APTITUDE TESTS

MULTIPLE APTITUDE TESTS

NAME/ADDRESS	COST	DESCRIPTION	DISABILITY POPULATION	ADMINISTRATION			SCORING		
				GROUP	IND	TIME	HAND	M*	TIME
Differential Aptitude Test Battery (DAT) The Psychological Corp., 757 Third Avenue, New York, NY 10017		Paper and pencil test that measures 9 aptitudes, verbal reasoning; numerical ability; abstract reasoning; clerical speed & accuracy; mechanical reasoning; spatial relations; spelling; language usage; general mental ability. Separate answer sheet.	Deaf, Blind (some), PH, LD, ED, Grades 8-12, with 6th grade reading level	X	X	4 hrs.	X	X	15 min.
General Aptitude Test Battery (GATB) Contact local State Employment Service who certifies people to give this test.		12 subtests, 8 paper-and-pencil, 4 involving apparatus, that measure 9 aptitudes: general learning ability; verbal; numerical; spatial perception; form perception; clerical perception; motor coordination; finger dexterity; manual dexterity	EMR (some), Deaf (some), Blind (some), Physical, (some) LD, ED Grades 9+ with a 6th gd. reading level, be able to calculate, follow directions.		X	2 1/2 hrs.	X	X	20 min.
Armed Services Vocational Aptitude Battery (ASVAB) Contact local military recruiter. Note: Test Information and Names and addresses of student are sent to the Department of Defense.	Free through military service recruiter	Paper and pencil test that measures 12 aptitudes: general information; numerical; attention to detail; work knowledge; arithmetic reasoning; spatial perception; math knowledge; electronic information; mechanical comprehension; general science; shop information; automotive information.	Deaf, Physical, LD, ED, 7th grade reading level	X		3 hrs.		X	
Career Ability Placement Survey (CAPS) Edits Publishers, P.O. Box 7234, San Diego, CA. 92107	\$54.00 for 30 tests	Paper and pencil test that measures aptitudes: mechanical reasoning; verbal reasoning; numerical; language; word knowledge; perceptual speed and accuracy; manual speed and accuracy.	Deaf, Blind (some), Physical, LD, ED Grade 8+ Good readers	X	X	40 min.	X	X	20 min.

SINGLE APTITUDE PERFORMANCE TESTS

Bennett Mechanical Comprehension Test	Booklets: 25 for \$13.50. Answer sheets 50 for \$6.25. Manual & Score keys, \$16.75	Mechanical: Similar to mechanical reasoning of DAT. Student answers questions about a picture. Fifth grade reading level.	EMR (some) Deaf Physical, LD, ED All requires 5th grade reading level or test can be read	X	X	30 min.	X		5 min.
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NAME/ADDRESS	COST	DESCRIPTION	DISABILITY POPULATION	ADMINISTRATION			SCORING		
				GROUP	IND	TIME	HAND	M	TIME
Minnesota Clerical Test Psychological Corp., 757 Third Avenue, New York, NY 10017	Book- lets: 100 for \$24.00.	Clerical: tests speed & accuracy in clerical tasks. Two parts: number and name checking.	EMR, Deaf, Physical, LD, ED.	X	X	15 min.	X		5 min.
Revised Minnesota Paper Form Board Test	Booklets with manual and key 25 for \$7.00.	Form perception: 64 two dimensional diagrams, students pick one of five fig- ures that match the sample; time test.	Deaf, Physical, LD, ED.	X	X	20 min.	X	X	5 min.
Bennett Hand-Tool Dexterity Test The Psychological Corp., 757 Third Ave., New, N.Y. 10017	Initial cost \$66.00	Manual dexterity with tools. Student uses wrenches & screwdriver to dis- assemble nuts & bolts, remove, and re- place on a board.	All		X	5-15 min.	X		5 min.
Crawford Small Parts Dexterity Test The Psychological Corp., 757 Third Ave., New York, N.Y. 10017		Fine eye-hand coordination using small tools. Two parts each with prac- tice: (1) place pins in hole using tweezers and place collars over the pin (2) with screwdriver put screws in a plate.	All		X	15-30 min.	X		5 min.
Pennsylvania Bi-manual Worksample Educational Test Bureau, American Guidance Serv., Publish- ers Bldg., Circle Pine, MN 55014	\$55.00 \$1.80 per 50 forms	Hand and finger dexterity. Two parts: assemble nuts and bolts; disassem- ble.	All Ages 15+		X	15-20 min.	X		5 min.
Purdue Pegboard Sci- ence Research Asso., 259 East Erie, Chicago, IL 60610		Gross Manual and finger dexterity: pegboard with 4 cups and 2 rows of 25 holes in which pins are inserted in a timed period.	All		X	10-15 min.	X		5 min.
Minnesota Rate of Manipulation Test American Guidance Ser., Publishers Bldg., Circle Pines, MN 55014	\$93.00 \$3.40 for 50 forms	Arm-hand dexter- ity. Wooden, colored discs are manipulated through several procedures: placing, turning, displacing and one-hand and two-hand turning.	All		X	20-30 min.	X		5 min.
Minnesota Spatial Rel- ations Tests American Guidance Ser., Publishers Bldg., Circle Pines, MN 55014	\$260.00	Spatial perception. Four boards with holes of various shapes. Place shapes in holes in all 4 boards.	All		X	20-30 min.	X		5 min.
Ludlow Evaluation of Lifting and Carrying (L.E.L.A.C) Vocational Evaluation Assoc., 6506 Lancot Hill Circle, Austin, TX 78745	\$25.00	Lift and Carry 10 lbs. up to 120 lbs.	All	X	X			X	

APPENDIX L

Considerations for the Selection and Purchase of Commercial Work Sample Systems

CONSIDERATIONS FOR THE SELECTION AND PURCHASE OF COMMERCIAL WORK SAMPLE SYSTEMS

Selection	Purchase
1. How long does it take to administer each test/battery?	1. Can you buy only one unit in a battery? Is there a discount if you buy the battery?
2. How many students can be tested at once?	2. What type of equipment is involved? What is the chance of breakdown?
3. Are the instructions presented in verbal, pictorial, or written form? Is there demonstration and can the client ask questions?	3. How much space is needed to store the work sample and the consumable items?
4. Are job clusters or specific jobs sampled?	4. What sort of consumable items are needed? Are they readily available at reasonable cost? What is the turn-around time from order to receipt?
5. What norm groups are used? What kind of clients will be tested? What are the placement goals?	5. What is the initial cost? Is there a discount if sold to an educational institution?
6. How do the jobs or job clusters being tested compare with jobs available in the student's community (or sheltered workshop)?	6. Is training required on-site or at the factory? What training costs are included in the price?
7. Are there any provisions made for scoring/recording behavioral observations? How does this influence outcome scores?	7. What are the maintenance contract costs? What is the turn-around time on service? Are items serviced on-site or in the factory?
8. Have follow-up studies been done with tested groups to demonstrate reliability of samples?	

More detailed information concerning commercial vocational evaluation systems can be obtained from the Materials Development Center (see Appendix D) in: Karl Botterbusch. *Commercial Vocational Evaluation Systems*, 1980. (Cost: \$5.00)

APPENDIX M

Steps In Developing A Local Work Sample

STEPS IN DEVELOPING A LOCAL WORK SAMPLE

1. Decide which work sample to develop. This involves a determination of the jobs available in an area which are feasible for handicapped students and vocational education or other programs available to students. Work samples should first be developed for those programs or jobs most available to students. As the evaluation program is improved, more work samples may be developed. A truly comprehensive vocational assessment program provides assessment and exploration of a broad range of occupations.
 2. Conduct a job/curriculum analysis. When developing a work sample for vocational programs, a training analysis similar to that suggested in Chapter 2 should be conducted. This analysis should determine precise entrance criteria, success behaviors, and teaching format, with potential modifications, for each program—especially those that are targeted for assessment. If assessment is intended to provide recommendations for job placement, a job analysis should be performed (see Chapter 2). A detailed, accurate analysis must be conducted that includes a determination of job tasks, work requirements, physical demands, and environmental conditions.
 3. Design and construct the work sample. The tasks selected for inclusion in the sample must be based on their importance to the job or training program and the feasibility of replicating them in the work sample. These tasks must be sequenced, with the necessary practice sessions and instructions included.
 4. Develop criteria for success. Some means must be developed to determine how well a student performs on a work sample. These include development of norms, use of behavioral checklists, and application of task ratings according to categories and levels of ability used in the *Dictionary of Occupational Titles*. Establishing and updating norms is an ongoing process. Performance on the sample should be measured by number of correct products, number of errors, quality of work, or time required for completion—whichever element is most appropriate for the particular task. The groups with whom the individual is to be compared should be carefully selected and should reflect the population with whom the handicapped person will be competing for a job. Percentile scores or standard scores are most often used in establishing norm tables. More information on these methods can be found in any standard measurement text.
 5. Write the work sample manual. For the work sample to be systematically administered and used by other professionals, a manual is necessary. It should include forms of specific instructions to be given to the individual and to be followed by the evaluator. The Materials Development Center at the University of Wisconsin-Stout (see Appendix D) has designed a standard format for such a manual that allows agencies and individuals to use work samples developed by others. A guide, *Work Sample Manual Format*, may be obtained for \$3.25.
 6. Establish estimates of reliability and validity. Elaborate statistical tests are not needed, but it is necessary to see if the scores obtained on the work sample are consistent and if the sample measures what it purports to measure. Test-retest reliability is probably the most useful statistic in determining consistency. In terms of validity, it is most useful to determine if the essential tasks or activities of the job itself are realistically included in the work sample and if individuals who do well on the sample perform well on the real job (or in the vocational class) that the sample represents.
 7. Collect test data and develop norms.
-

Taken from Vocational Assessment of Students With Special Needs, Texas Education Agency, Project No. 11230049, 1982.

APPENDIX N

Checklist Guide To Vocational Evaluation

CHECKLIST GUIDE TO VOCATIONAL EVALUATIONGeneral Characteristics

1. Is there an area within the facility designated exclusively for providing vocational evaluation services?
2. Is the physical size of the evaluation unit adequate to handle the number of clients assigned to evaluation? (Average 100 sq. ft. per client.)
3. Is a private office available for the evaluator to speak confidentially to clients or to consultants?
4. Is the evaluator's desk arranged so that he can readily observe clients at the various work stations?
5. Is the area assigned for use in evaluation free from architectural barriers?
6. Is there sufficient lighting in the vocational evaluation area?
7. Is a soundproof or quiet testing room available if psychological tests are administered?
8. Are the client case records and data sheets used by the evaluator kept in a secure place when not in use?
9. Are psychological tests, manuals, scoring keys and related material stored under lock and key?

Policies and Program

10. Does vocational evaluation have the same administrative line status as other programs in the facility?
11. Are the objectives and goals of the vocational evaluation program stated in writing?
12. Is there an organized, in-service training program for new evaluators?
13. Have job descriptions for all staff in vocational evaluation been prepared?
14. Is there a structured formal system within the facility for rating the effectiveness and performance of the vocational evaluation staff?
15. Is adequate time provided for vocational evaluators to review current literature and research in vocational evaluation?
16. Are vocational evaluation staff free and encouraged to participate in local or regional conferences related to vocational evaluation?

17. Do the evaluators belong to the Vocational Evaluation and Work Adjustment Association?
18. Are the staff of the vocational evaluation unit familiar with the code of ethics regarding testing and confidentiality of information?

Information Prior To Evaluation

19. Does the evaluator establish a case file for each client assigned to vocational evaluation?
20. Does the policy of the facility insure that adequate referral information is obtained prior to admitting the client to evaluation?
21. Does the evaluation unit request the following referral data prior to accepting the client or beginning the evaluation?
 - A. Purpose or objectives of evaluation.
 - B. Specification of primary and secondary handicapping conditions.
 - C. General medical examination.
 - D. Information on social and family background.
 - E. Previous work history.
 - F. Psychological examination.
 - G. Information on behavioral problems.
 - H. Previous educational records (school transcripts, military training, trade or technical school, on-the-job training, etc.)
 - I. _____
22. Is a standard data sheet used to store basic information on the client in evaluation?

Vocational Evaluation Process

23. Is an orientation to vocational evaluation services routinely provided for new clients?
24. Does each client have an intake interview?
25. Are there periods of time in the evaluation program set aside for the referral counselor to talk with his client and/or vocational evaluator?
26. List the standardized psychological tests or inventories commonly used in the vocational evaluation program:

Intelligence tests:

Aptitude Tests:

Personality or Behavioral Inventories:

Interest Inventories:

Dexterity Tests:

27. List the areas of vocational instruction or training offered by the facility:

28. Is there evidence of the use of vocational training areas within the facility for job tryout evaluation?
29. Is there evidence of on-the-job evaluations outside the facility? (Service stations, grocery, etc.)
30. Is a formal evaluation report submitted to the referral agency or counselor by the evaluator?

31. Does the referring counselor or agency receive an evaluation report within three weeks after the evaluation is completed?
32. Does the evaluation report provide answers to the basic questions raised by the referring counselor?
33. Are there periodic written reports to referring counselors in long term or extended evaluations?
34. Does the evaluation report routinely provide recommendations for:
 - A. Social Adjustment Services
 - B. Personal Adjustment Services
 - C. Work Adjustment Services
 - D. Vocational Training
 - E. On-The-Job Training
 - F. Placement
 - G. Remedial Education
 - H. Workshop Employment
35. Is follow-up information by the referring counselor or agency routinely provided to the evaluation unit?

APPENDIX O

Sample Task Sheet

SUBCLUSTER: AUTO MECHANICS

Sheet 1 of 2

TASK: Maintain and service the ignition systems

Code: APS - AM05

Student Name: _____

Student Progress				Behavioral Task Knowledges/Task Skills	Instructional Methods					
Introduced	Involved	Productive	Employable	Given the necessary tools, materials, equipment, and requisite knowledge, the learner will	● Para-professionals provide sustained involvement with students having difficulty with this task. ● Students will be involved in maintaining and servicing the components of the ignition system - performing the identified job skills. ● Teacher demonstrates the use of testing equipment and service. ● Students view slide/sound program on ignition system. ● Give the blind student ample time for accumulating finger knowledge. Instructor must aid student in moving fingers for gathering information.					
				1. identify and verbally describe the operation and function of each ignition system component						
				2. recognize and observe specific safety precautions related to the servicing of the ignition system						
				3. draw the basic ignition system of an automobile to describe the relationship of the component parts						
				4. perform the following job skills with accuracy to meet the accepted manufacturer's specifications:	Task-Related Competencies					
				a. check compression and interpret readings (dry and wet)	Instructional Materials					
				b. check cylinder leakage and interpret reading	Title			Media	Bib.	
				c. check and adjust or replace distributor points and condenser	KNOWLEDGE	"Ignition Systems"			4	1
				d. remove and replace distributor, ignition wires, coil dist. cap	A 1,2,3,4,5, 6,7,8,9	3M transparencies (ignition)			12	15
				e. use dist. tester to check centrifugal and mechanical advance	NUMBERS	Mockups			2	
				f. check lobe accuracy and point alignment	D 2a,b, 4c,d, f,h, 5, 6	"V.W. Engine Manual"			14	33
				g. test coil and condenser to manufacturer's specifications	APPLICATION	<u>Motors: Auto Engines and Electrical Systems</u>			14	40
				h. check, clean, gap, or replace spark plugs	C 3,5,6,8					
					PHYSICAL					
					D 1a,b,c,d,f					
					2b					
					3c					

APPENDIX D

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Code: APS - AMOS TASK: Maintain and service the ignition systems

Basic Information for Cooperative Teaching

Suggestions:

Language of the Task

Quantitative Concepts

Contact points Cam lobe

Condenser

Distributor cap

Rotor

Ignition wires

Resistor

Spark plugs

Coil

Centrifugal

Mechanical

Advance

Timing

Dwell

Alignment

Gap

Identify ignition system components and parts from basic drawings.

Identify basic electrical schematic symbols, copy the basic ignition system using schematic symbols.

- Teaching the vocabulary by having spelling bees.
- Provide enforcement by using the parts manual.
- Bring parts of the ignition system to class and identify each part.

Supportive Instructional Materials:

3M transparencies
Ignition system components

APPENDIX P

Learner Analysis Profile

LEARNER: John
 SCHOOL: MacArthur H. S.
 DATE: October

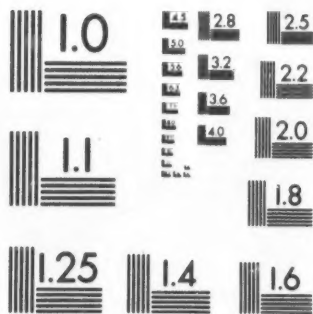
LEARNER ANALYSIS

PROFILE

Assessment/Appraisal Team:

Mr. Hall, Resource Room
Mr. Laird, Auto Mech.
Mr. Jenkins, Psychologist

Special Need Indicators	Learning Difficulty	Learning Strength	Documentation/Observed Behavior
QUANTITATIVE/NUMERICAL SKILLS Count and Record Add/Subtract Multiply/divide Measure General number use Money Other quantitative/numerical skills:			Scores at the 2nd - 3rd grade level on math subtests. No data on measuring skills. Recognizes denominations but has trouble making change.
VERBAL SKILLS Read Spell Record information Verbal communication Written communication Other verbal skills:			Reading comprehension & spelling are at 5th grade level. Sentence structure is elementary.
COGNITIVE SKILLS Retention Sequence Attentiveness Planning ability Mechanical aptitude Transfer Other cognitive skills:			Has some difficulty retaining critical information (e.g. home address) Has some difficulty planning ahead to complete tasks in auto class.



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS
STANDARD REFERENCE MATERIAL 1010a
(ANSI and ISO TEST CHART No. 2)

Special Need Indicator	Learning Difficulty	Learning Strength	Documentation/Observed Behavior
PERCEPTUAL SKILLS			
Form discrimination			Excellent hearing Unable to recognize subtle differences in shapes.
Space perception			
Color perception			
Touch discrimination			
Other perceptual skills:			
LANGUAGE SKILLS			
Listening			Has to have directions repeated.
Nonverbal expression			
Technical vocabulary			Needs help with basic vocabulary for auto course
Grammatical expression			
Other language skills:			
PSYCHOMOTOR/PHYSICAL SKILLS			
Physical strength			Arms & hands well developed
Hand-eye coordination			
Manual dexterity			
Mobility			
Balance			Has cerebral palsy; walks with definite gait.
Other physical skills:			
			Has trouble with balance because of CP involvement.
SOCIAL SKILLS			
Sociability			Has several friends outside resource room.
Cooperativeness			
Conformity			Is cooperative most of time.
Loyalty			
Safety			Usually participates in small group work without hesitation.
Responsibility			
Constitutivisy			
Participate			
Other social skills:			

Special Need Indicators	Learning Difficulty			Learning Strength		Documentation/Observed Behavior
OCCUPATIONAL INTERESTS						
Agriculture/Natural Resources						
Automotive and Power Services						<i>Is interested in working on mini-bike.</i>
Construction/Manufacturing						
Graphics/Communications						
Food/Clothing/Child Care						
Health						
Office/Business						
Other or specific occupational interests:						<i>This interest inventory does not yet reflect positive occupational interests.</i>

APPENDIX Q

Professional Organizations

PROFESSIONAL ORGANIZATIONS

Council For Exceptional Children -- Division on Career Development (DCD)

CEC Headquarters
1920 Association Drive
Reston, Virginia 22091

American Vocational Association -- Special Needs Division (AVA/SN)

AVA Headquarters
2020 N. 14th Street
Arlington, Virginia 22201

National Association of Vocational Education Special Needs Personnel (NAVESNP)

Jim Brown, President
University of Minnesota
Room R460 VoTech Building
St. Paul, Minnesota 55108

National Association of School Psychologists -- Vocational School Psychology
Specialty Area (NASP)

National Association of School Psychologists
1225 Connecticut Avenue, N.W.
Suite 609
Washington, DC 20036

Vocational Evaluation and Work Adjustment Association (VEWAA)

VEWAA
1522 K Street
Washington, D.C. 20005

Materials Development Center

Materials Development Center
Stout Vocational Rehabilitation Institute
University of Wisconsin-Stout
Menomonie, Wisconsin 54751

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